Report to the Washington Department of Ecology

Westside Stormwater Group Chapter

Version 2.0

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Base Document for Rewrite

I. Advisory Group Composition and Process Overview

II. Issues of Scope

Areas being Regulated under Municipal Stormwater Permits

Background

This discussion pertains to the issue of areas being regulated by National Pollution Discharge Elimination System (NPDES) permits under Phases I and II of the federal NPDES permit program as they relate to municipal borders. The Clean Water Act regulations describe the specific situations under which municipally owned Separate Storm Sewer Systems (MS4s) are required to obtain coverage under an NPDES permit for stormwater discharges. The Phase I permit requirements apply to large and medium-sized MS4s that meet either of the following two requirements.

- The MS4 is located in an incorporated place with a population over 100,000 (as recorded in the 1980 or 1990 census). The permit applies to the entire city.
- The MS4 serves unincorporated areas in a county that had a population of at least 100,000 residents at the time of the 1980 or 1990 census. Only the unincorporated portion of the county must have permit coverage.

No new "Phase I" municipalities will be identified.

Phase II requirements apply to small MS4s which discharge to surface waters, and are either

- o Located in census defined urbanized areas, or
- Designated by the permitting authority (Ecology) as having the potential to result in exceedances
 of water quality standards or other significant water quality impacts, including habitat and
 biological impacts.

Under the NPDES Phase II regulations (governing smaller municipalities), only the portion of a municipal separate stormwater system (MS4) that is located within a census-defined urbanized area (i.e., population density greater than 1000 individuals per square mile) and discharges to surface waters is regulated. Ecology is granted the authority to designate additional MS4s for inclusion in the Phase II permit, based on explicit state-defined criteria, possibly to include: discharges to sensitive waters; high growth or growth potential; high population density; or contiguity to urbanized areas¹. Ecology is also required to evaluate municipalities with populations greater than 10,000.

Ecology can also waive requirements for municipalities meeting certain requirements.

The State Water Pollution Control Act Chapter gives Ecology jurisdiction to control and prevent pollution of all waters of the state. These powers are potentially more substantive in scope than the federal stormwater regulations.

¹ These criteria are mentioned as guidance in the NPDES regulations at CFR 122.35(b)(1)(ii). Washington has not yet set its criteria.

Discussion

The federal regulations exclude from permit coverage several portions of Washington state, including and perhaps most notably, urban growth area (UGAs) that are slated for further development under the State's Growth Management Act. According to maps prepared for the WSG by the Department of Ecology, large portions of the UGAs in western Washington fall outside (but adjacent to) the census-defined areas that are subject to permit coverage. Other gaps in coverage include small incorporated areas located in counties that are not covered under Phase I or II permits, areas of commercial and light-duty development without resident populations, and some sensitive water bodies. Therefore, coverage is not federally mandated in:

- Non-urbanized areas within UGAs in Phase II counties;
- o Non-urbanized areas within Phase II cities;
- Some urbanized areas having total resident populations less than 1,000.

What areas should Phase II stormwater permits cover?

Alternative 1	Apply the Phase II permit only to the census-defined urbanized area under the federal rule.
Alternative 2	Apply Phase II permit to the census-defined urbanized areas, plus: a) Unincorporated Urban Growth Areas and urbanized commercial/industrial areas b) All areas in Phase II cities.
Alternative 3	Apply Phase II permit to the census-defined urbanized areas, plus: a) Unincorporated Urban Growth Areas, urbanized commercial/industrial areas, and MS4-served areas draining to sensitive water bodies in Phase II counties b) All areas in Phase II cities.
Alternative 4	Apply the Phase II permit to all areas in Phase II counties and cities (the same as Phase I permits).

Considerations

Administrative

- Managing larger geographic areas will require greater flexibility for all parties' and may necessitate development of a more complex permit. Compliance with regulations may vary.
- Special Purpose Districts may still pose a challenge, especially if their unmanaged (or improperly managed) discharges flow into a municipal facility for treatment and are then discharged along with other municipal stormwater flows. [See Section ??? for a discussion of Special Purpose Districts.]
- Would Ecology feel compelled to update a permit each time a UGA boundary is altered? (This is less of an issue for census-defined urbanized areas, which are redefined every 10 years.)

Legal

Although Ecology can require coverage of additional MS4s under NPDES Phase II, it can only do so if those MS4s meet Ecology's criteria (as yet undetermined). Ecology lacks stormwater data for many MS4s found in UGAs and may be challenged to make a case to include additional locations.

- Municipalities have no authority to regulate areas outside their city or county's limits. As a result, there may still be inconsistency across jurisdictions.
- The expanded options increase local government exposure to third party lawsuits.

Cost and Equity

- Costs above the basic requirements are an additional unfunded local expense.
- It is more efficient and cost-effective to implement stormwater technologies during new
 development than to retrofit existing systems to address ongoing problems. Including smaller
 municipalities that do not yet meet population thresholds helps those jurisdictions avoid retrofit
 expenses that will arise once they cross the population threshold.
- O Development fees/other costs are likely to be higher in jurisdictions subject to stormwater regulation. To avoid these fees, development pressures may intensify in areas not covered under Phase I or II permits, such as UGAs. Over time, then, the UGAs will meet census-defined "urbanized area" criteria and be subject to Phase II requirements. Including UGAs in the Phase II designation may help moderate development pressures on UGAs and other undeveloped areas.
- Fees from new development can be leveraged to offset costs of managing stormwater in urbanized areas.

Environmental Benefit and Impact

- o Preventing water quality degradation is preferable from an environmental standpoint than restoring or enhancing water quality (e.g., by retrofitting developed areas). Thus, it makes sense to proactively address less developed areas such as UGAs as they are developed.
- Significant new development may still occur in "urbanized areas." Opportunities to positively impact development decisions at these sites may be lost if municipalities are focused elsewhere.
- Sensitive water bodies have special ecological importance and deserve attention and protection under regulatory programs. Taking a proactive approach in their protection helps municipalities avoid the costs of restoring (or trying to restore) these natural areas.
- Municipalities that provide consistent coverage throughout their jurisdictions may be more likely to positively impact water quality.
- Cities and counties often have different water quality (and development) objectives. Political pressures may overwhelm jurisdictions' ability to coordinate development and maintenance standards. Standardizing to the "lowest common denominator" will not serve environmental objectives.

Types of Discharges Regulated under MS4 Permits

Background

The federal stormwater rules state that MS4 operators must obtain an NPDES permit for discharges of stormwater to surface waters (except under certain, defined circumstances). An MS4 is defined as "a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains owned or operated by the municipal entity." As a rule, streams, lakes, and other natural waterways are not part of the MS4 system. Strictly

² 40 CFR 122.26(b)(8)

interpreted, the federal rules do not require NPDES municipal stormwater permittees to address direct discharges³ to surface waters from private properties.

The State Water Pollution Control Act requires counties, municipalities, industries, and commercial operations to obtain a permit to dispose of wastes into the waters of the state. The state permit could, therefore, cover discharges of wastes directly to surface waters. At this time, the state does not have a permit program regulating direct discharges to surface waters.

Discussion

Direct discharges to surface waters (e.g., from commercial properties into adjacent streams) are not currently a major source of stormwater runoff in Washington State but may become more important over time. Stormwater and non-stormwater runoff can mix in streams and creeks that discharge into larger waterbodies. In some Western Washington jurisdictions, pollution from direct discharges may travel through municipalities' pumping stations, be combined with municipal discharges, and ultimately contribute to an excursion above water quality standards. WSG members expressed concerns about such discharges and their impact on water quality, but were not in agreement that municipalities should be responsible for regulation of these direct discharges.

Should Ecology regulate direct discharges to surface waters under MS4 permits?

Alternative 1	Hold municipalities accountable only for discharges to their MS4 system and not for others' direct discharges to water bodies. Municipalities may help identify/locate direct
	dischargers but will look to Ecology to regulate direct discharges to water bodies.
Alternative 2	Apply the MS4 permit to all discharges, including direct discharges.

Considerations

Administrative

- Municipalities responsible for direct discharges to surface waters become responsible for assuring multiple points of compliance. The resulting regulatory matrix can be quite complex.
- Ecology may not have adequate staff to identify and take enforcement actions against direct dischargers.

Legal

- Ecology does not have the legal authority to compel municipalities to regulate direct discharges.
- Stormwater runoff from commercial and residential properties can only be addressed via municipal permits. Stormwater runoff from industrial and construction activities is addressed under separate permits.
- Municipalities are unsure how to assure compliance with anti-degradation requirements and may be unwilling to be held accountable for others' discharges. To limit their own legal liability, municipalities may be compelled to require landowners to apply directly for permit coverage under the State Water Pollution Control Act.

³ In this context, "direct discharges" are those stormwater discharges that do not flow through the MS4 itself but come from properties within the MS4's jurisdiction.

- o Permits should refrain from creating local liability that does not already exist.
- At times, nonpoint sources (or other non-stormwater discharges such as runoff from lawn watering) may cause water quality problems in a receiving water. These sources are not covered under MS4 permits. Municipal stormwater operators have no control over such sources. They should not be held accountable for discharges over which they have little or no control.

Cost and Equity

- Monitoring to determine which direct dischargers are responsible for stormwater pollution is expensive.
- Water quality violations may occur more frequently as unregulated sources cause greater pollutant loading. Ultimately, this may cause an impairment of the waterway. If a water quality standard violation occurs and a total maximum daily load (TMDL) is required to come back into compliance with water quality standards, the municipality may be asked to take significant, costly steps to come back into compliance.

Environmental Benefit and Impacts

 Managing the full range of stormwater discharges helps minimize the cumulative water quality impact of stormwater and improves the likelihood of maintaining a receiving water's compliance with applicable water quality standards

Coverage of Discharges to Groundwater

Background

The federal rules call for the regulation of applicable municipal stormwater discharges to surface waters. EPA has also stated that discharges of pollutants to surface waters via a hydrologic connection provided by groundwater recharge of surface waters are subject to NPDES permitting requirements. Under the federal regulations, direct discharges to groundwater are not subject to NPDES regulation. The Underground Injection Control (UIC) program established under the federal Safe Drinking Water Act also provides regulatory coverage for many (but not all) stormwater discharges to groundwater. The UIC program requires that injection wells⁴ be registered and meet "a non-endangerment standard" to protect underground sources of drinking water. (Note: Unlike the federal NPDES requirements, the Safe Drinking Water Act does not contain provisions for enforcement by third party lawsuits.)

The State Water Pollution Control Act defines waters of Washington State to include lakes, rivers, ponds, streams, <u>underground waters</u>, salt waters, and all surface waters and watercourses within the state's boundaries (emphasis added).

The state's Phase I municipal stormwater permit required qualifying jurisdictions to manage all of their MS4 discharges, including discharges to groundwater. Discharges to surface water are regulated under the NPDES and state permit authorities; discharges to groundwater are regulated only under state authorities. Phase I municipalities were not categorically required to take action on groundwater discharges in the first Phase I permit.

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⁴ Injection wells include man-made or improved holes in the ground that are deeper than they are wide at the ground surface, or improved sinkholes or subsurface fluid distribution systems

Discussion

WSG members acknowledged the dynamic tension between the NPDES requirements (focus on surface water) and those established in the state Water Pollution Control Act (protect all waters, including groundwater) and appreciate the impact of groundwater-borne pollutants on the state's waters, including sensitive drinking water aquifers. One concern about including discharges to groundwater in the NPDES permit is that it is difficult to locate and manage these discharges. A second concern is that it raises the specter of a third party lawsuit under the Clean Water Act for failure to comply with state law.

How should stormwater discharges to groundwater be regulated through the MS4 permit?

Alternative 1	Issue an NPDES Phase II municipal stormwater permit that applies only to discharges to surface waters.
Alternative 2	Issue separate groundwater and surface water stormwater permits.
Alternative 3	Issue a combined NPDES/State Waste Discharge permit for Phase II municipal stormwater and require that municipalities confirm qualitatively that discharges to groundwater meet the non-endangerment standard. Municipal UIC owners would not be required to implement all of the programmatic activities described in the federal Phase II regulations.
Alternative 4	Issue a combined NPDES/State Waste Discharge permit for municipal stormwater and require the same programmatic activities for discharges to groundwater and surface water.

Considerations

Administrative

- Administering a combined permit is less burdensome for the state than administering two separate permits.
- Requiring the development and maintenance of two separate permits may increase the municipalities' administrative burden.
- The Washington Department of Health, not Ecology, has primary responsibility for implementing and assuring compliance with the Safe Drinking Water Act. Ecology will have to coordinate closely with the Department of Health to implement Phase II requirements for discharges to groundwater.
- The permit should not transfer oversight/enforcement responsibilities of one entity (e.g., Department of Health oversight of failing septic systems) to another (a municipal stormwater manager).

Legal

- o Issuing a stormwater permit limited to discharges to surface water limits local liability to that which is created by federal law. Permits should not create new local liability.
- The municipal stormwater permit should not be called upon to fix legal/statutory problems that arise from differences between UIC, state, and federal water quality protection requirements.
- o It is not clear whether Ecology must regulate discharges to groundwater through a permit to satisfy state law or whether this requirement can be satisfied by regulating these discharges under the state UIC rules. Clarification from the Attorney General's office is needed.

- Although inclusion of discharges to groundwater in an NPDES permit may subject parties to
 additional third party litigation (which is allowable under the federal requirements but not the
 state Water Pollution Control Act), the permit can also shield the permit holder from prosecution
 if it clarifies that discharges to groundwater are subject only to state requirements.
- Not all discharges to groundwater are collected/transported via UIC facilities. Under the combined permit option, discharges to groundwater via non-UIC conduits (e.g., infiltration through ponds or basins) lack permit coverage/oversight.

Cost and Equity

- Many Phase II municipalities lack resources to incorporate discharges to groundwater in their stormwater management programs.
- Municipal infiltration facilities already regulated under the UIC program may be subject to duplicative requirements if also made subject to NPDES regulations.

Environmental Benefit and Impact

 Managing stormwater discharges to groundwater provides for the development of a comprehensive stormwater management program and the control of all stormwater sources, not just discharges to surface waters. This option provides for control of all groundwater discharges (not just those regulated under the UIC program).

III. Issues of Implementation

Level of Effort required of Phase II Municipalities to Satisfy Permit Requirements/ **Maximum Extent Practicable**

Background

The Clean Water Act requires that municipal stormwater discharges obtain permit coverage for discharges to surface waters. The Act also states that permits for discharges from municipal storm sewers:

- o Shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers: and
- Shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.⁵

The Clean Water Act also states that permits for discharges of industrial stormwater must require compliance with technology-based requirements and water quality standards.

Under the Phase II federal rules, regulated MS4's are required to:

- Reduce the discharge of pollutants to the maximum extent practicable (MEP);
- o Protect water quality; and
- Satisfy the appropriate water quality requirements of the Clean Water Act.

The regulations state further that such stormwater management programs must include "six minimum control measures" (or six minimum measures) to meet the conditions of the NPDES permit. The six minimum measures are generally satisfied through implementation of Best Management Practices (BMPs). The regulations also direct MS4 operators to comply with "any more stringent effluent limitations, including permit requirements that modify, or are in addition to, the minimum control measures based on an approved total maximum daily load (TMDL) or equivalent analysis."⁷ Phase II MS4 operators are also required to evaluate program compliance, the appropriateness of identified BMPs, and progress toward identified measurable goals. The WSG referred to this full set of requirements as the "six plus two" minimum requirements.

EPA did not specifically define what MEP means, leaving it up to the permitting authority to determine what constitutes MEP. For Phase I and Phase II, the EPA rules require that the regulated MS4s describe their stormwater management program. It is up to the permitting authority to determine if the proposed program satisfies the MEP requirement or to write a permit that specifies MEP.

Discussion

⁵ Section 402(p)

⁶ The six minimum control measures include: Public Education and Outreach; Public Involvement/participation; Illicit discharge detection and elimination; Construction site stormwater runoff control; Post construction stormwater management in new and redevelopment; and Pollution prevention/good housekeeping for municipal operations.

⁷ 40 CFR 122.34(e)(1)

The heart of the WSG's discussion of this issue focused on the question of what constitutes MEP and who defines it. The definition of MEP directly informs decisions about what actions constitute the six plus two minimum measures (and, therefore, the level of effort required by each jurisdiction to come into compliance with the requirements). MEP is likely to change over time as new technologies become available and cost-effective. Related issues discussed by the group include: is MEP set uniformly across Western Washington or can it be defined according to the size of a jurisdiction and/or the maturity of its stormwater management program?

What constitutes MEP?

Alternative 1	MEP should be set as a BMP standard. Appropriate BMPs may be considered those for which the costs and benefits are in direct relationship.	
Alternative 2	MEP should equal AKART ("all known available and reasonable technologies").	
Alternative 3	MEP's definition should consider whether an action is "technically sound, financially responsible, and environmentally beneficial."	
Alternative 4	MEP should be equal to water quality standards.	

Considerations

Administrative

- Because MEP is not defined clearly in the federal Phase I or II rules, Ecology and others will need to focus early attention on developing a clear definition of the concept. Depending on which of the above alternatives is selected, this effort could require a determination of what constitutes "all known available and reasonable technologies" or "technically sound," "financially responsible," and "environmentally beneficial."
- Obetermination of what actions within the framework of six plus two minimum measures will be required to achieve MEP will require considerable agency time and energy.
- O BMPs laid out in the 2001 Stormwater manual may be a useful starting point for defining applicable approaches under Alternative 1.

Legal

- o Federal regulations state "Implementation of best management practices consistent with the provisions of the [required] storm water management program...constitutes compliance with the standard of reducing pollutants to the 'maximum extent practicable.'" Elsewhere, the regulations state that MEP generally means implementation of BMPs. EPA guidance promulgated in November 2002 also states that MEP is a BMP standard. Clarification of the intent of the rule will immediately inform the appropriate definition of MEP.
- The federal courts recently affirmed that federal law does not require municipal stormwater permits to comply with water quality standards. However, this does not preclude permitting authorities from setting water quality standards as the MEP standard. Other federal requirements (e.g., governing establishment of TMDLs) require that receiving waters attain all applicable water quality standards. Therefore, even if municipal stormwater permit regulations do not call for compliance with water quality standards, stormwater discharges may ultimately be expected to

⁹ 40 CFR 122.34(a)

- meet applicable water quality standards through implementation of a TMDL or other water quality management plan.
- o If compliance with water quality standards is established as the MEP standard and Ecology is unable to enforce this standard, the agency may find itself in danger of losing program delegation (for failure to assure full implementation of NPDES requirements).
- Tying MEP to AKART may strengthen the connection between the federal and state requirements. On the other hand, establishing MEP as equivalent to AKART may run counter to the Growth Management Act and other state mandates.
- Many interpret AKART as a more stringent requirement that compels compliance with state water quality standards.
- State law requires Ecology to maintain the highest purity of all waters of the state. This is often interpreted to call for compliance with applicable water quality standards through permits (and other mechanisms).
- Jurisdictions are bounded under state law by the vesting of certain rights. Under state vesting doctrine, new standards cannot be applied to already vested development. The state cannot eliminate pollution from entering MS4 because it has no legal means to make private property upgrade water quality controls.

Cost and Equity

- Retrofitting existing facilities to meet new design standards or water quality standards can be very expensive and may, at times, run contrary to other protections (e.g., vesting) granted elsewhere under state law.
- Monitoring required to implement a water quality standards-based MEP may be quite resourceintensive. Some municipalities could be required to sample hundreds of outfalls for multiple parameters.
- Other stormwater permits (e.g., industrial) require permittees to comply with applicable water quality standards.
- MEP must be defined carefully to refrain from compelling municipalities to regulate any non-stormwater discharges (e.g., septic leakages) that travel through the MS4 systems.

Environmental Benefit and Impact

- Placing strong emphasis on new development, redevelopment, and retrofitting existing facilities may bring about more comprehensive and faster water quality improvements.
- Working proactively to meet water quality standards will provide maximal water quality benefit and help avoid stormwater-induced water quality violations.

Should MEP be uniformly defined across Western Washington?

Alternative 1	Ecology should define a single MEP standard for all MS4 permittees across Western	
	Washington. Options include defining it via guidance or regulatory code.	
Alternative 2	MEP should vary by jurisdiction.	

Considerations

Administrative

- Obetermining what constitutes MEP for Western Washington jurisdictions can require considerable agency resources and will be challenging to accomplish. It may be more timely and efficient for Ecology to establish a single MEP standard across Western Washington than attempting to establish site-specific criteria. On the other hand, MS4 operators are often in the best position to determine what actions/activities will most successfully manage stormwater pollution in their jurisdictions.
- Establishing MEP at the jurisdictional level provides a clear avenue for local input into the development of a municipal stormwater management program.
- Greater public involvement introduces the need for additional staff resources to manage and respond to public suggestions and queries.

Legal

- MEP has not been defined elsewhere. Over time, the courts will likely clarify what constitutes MEP
- It is not clear whether EPA can leave it to individual jurisdictions to establish MEP. In January 2003, the US Court of Appeals ruled that EPA's Phase II rules impermissibly left the decision of what constitutes MEP up to the individual applicant. Currently, the EPA and others have filed a petition for a re-hearing in this case.

Cost and Equity

- Municipalities are concerned about being asked to implement specific measures that cause them to divert resources from other important activities.
- Local officials may be more willing to support implementation of measures/program activities that are explicitly prescribed by the state agency.
- Allowing the MEP determination to factor in a jurisdiction's present size, ability to perform, ability to pay, and the natural resources affected may help ensure that MS4 operators will be able to successfully and quickly implement a municipal stormwater management program.
- Municipalities that have already expended considerable resources to develop stormwater management programs do not want to be penalized for working proactively to management stormwater pollution.
- Jurisdictions have different financial abilities to implement stormwater program activities. What
 is financially do-able in one jurisdiction in 2003 may not be in another. A jurisdiction's current
 ability to implement stormwater program activities does not determine that jurisdiction's ultimate
 programmatic capabilities. MEP, therefore, can be set to encourage maximal stormwater
 protection, whether on a site-specific or regional basis.

Environmental Benefit and Impact

Waters of the state belong to all citizens, not just residents of a particular jurisdiction. The
definition of MEP and selection of appropriate stormwater management program actions should
consider this and not be unduly influenced by a jurisdiction's particular economic or political
climate.

Program Evaluation/Monitoring Requirements

Background

The Phase I federal rules call for regulated MS4s to submit annual reports that include the following: the status of the municipality's implementation of its stormwater management program; proposed changes to the stormwater management program; necessary revisions to the assessment of controls; summary data, including monitoring data, accumulated over the past year; a description of the number and nature of enforcement actions, inspections, and public education programs implemented; and identification of water quality improvements or degradation.

The Phase II federal rules require MS4 operators to evaluate program compliance, the appropriateness of identified BMPs, and progress toward achieving identified measurable goals as one of the six plus two minimum measures. Regulated entities are required to submit annual reports to Ecology during their first permit terms and, in subsequent permit terms, to submit reports in Years Two and Four of each cycle. These reports must include the results of evaluations described, as well results of any information collected and analyzed during the reporting period, a summary of activities planned for the next reporting period, and any changes in identified BMPs.

Discussion

The WSG focused primarily on the evaluation, and not the reporting, requirements laid out in the regulations, giving special consideration of what kinds of monitoring should be required. The group considered three types of evaluation that may be useful—BMP effectiveness; individual MS4 stormwater program effectiveness; and the effectiveness of Ecology's program, either at a statewide or regional (Western Washington) level. It also considered which kinds of information provided the greatest value for managing local and statewide stormwater programs. Members observed that the evaluation does not need be tied to a compliance determination. The group noted that the evaluation can, but does not need not to, rely on monitoring information, and considered whether Phase I and Phase II requirements should be handled differently and whether or how Phase I and II efforts can be coordinated or combined.

What types of program evaluation/monitoring should be required by the MS4 stormwater permit?

Alternative 1	Require permittees to evaluate only the effectiveness of their overall programs, and not the specific effectiveness of any given BMP.
Alternative 2	Require MS4 operators to evaluate the effectiveness of the specific BMPs they employ, as part of an evaluation of the effectiveness of their programs. MS4s cannot measure program effectiveness without looking at the effectiveness of individual program measures.
Alternative 3	Require MS4 operators to do baseline environmental monitoring, in addition to the program evaluation described elsewhere in the rule. This monitoring should focus on establishing priority areas (using a risk-based model).
Alternative 4	Establish a fund into which municipalities can contribute to conduct baseline environmental and/or BMP effectiveness monitoring.

Considerations

Administrative

- Requiring MS4s to conduct extensive evaluations will cause those municipalities to divert more resources into program evaluation, leaving fewer resources for program implementation.
- It is not the responsibility of local stormwater management programs to assess or evaluate the
 effectiveness of individual BMPs. That is primarily an EPA responsibility, and it should not be
 thrust upon municipalities.
- Municipal stormwater management programs generally lack the resources to conduct effectiveness evaluations or to establish baseline or environmental trends datasets. Most often, such activities are conducted by the state or private entities (such as permitted industrial facilities).

Legal

- Neither the Phase I nor the Phase II regulations require effectiveness monitoring (at either the BMP or programmatic level). Instead, the regulations require MS4s to report on their compliance with (and progress toward) program requirements. The appropriateness of BMPs can in many cases be determined using a narrative evaluation.
- The regulations are silent on the question of whether Ecology should or can judge the adequacy of any regulated municipal stormwater management program. EPA may appeal a recent court case related to this issue or it may address the issue through a regulatory revision.
- Associating water quality outcomes with specific administrative/programmatic actions may be expensive and time-consuming.

Cost and Equity

- Other programs and agencies may already conduct baseline environmental monitoring. Asking MS4 operators to do so may force duplication or the diversion of resources from other program activities.
- Mandatory program compliance evaluation/monitoring provides less aggressive municipalities a stronger impetus to fully implement program requirements.
- BMP effectiveness evaluations take several years to complete and can be very costly. Municipalities may be able to contribute toward a larger program but generally lack the resources to conduct such evaluations.
- Municipalities may be more willing to implement a voluntary monitoring program (either related to BMP effectiveness or environmental quality). Voluntary programs can yield higher-quality data.

Environmental Benefit and Impact

- Evaluation results that are linked to environmental results provide the most meaningful assessment of environmental impact. Given that the aim of the stormwater management programs is to control the movement of pollution into water bodies, effectiveness monitoring may be relevant. BMP effectiveness monitoring provides the most direct link from action to environmental outcome.
- Baseline environmental monitoring can help municipalities understand and prioritize their stormwater problems and select the most appropriate BMPs.

Additional Measures

Background

The federal requirements identify eight minimum measures for inclusion in an NPDES Phase II stormwater management program (the "six plus two"). The Group considered whether the state permit should include other measures in addition to these federal requirements.

Discussion

The Puget Sound Water Quality Action Team has articulated a comprehensive approach to stormwater management. This comprehensive approach advises the adoption of the Ecology technical manual as well as securing stable funding. A comprehensive program would go beyond the federal requirements to include: a system of ranking and prioritizing problems, low-impact development practices, watershed or basin planning, and targeted group monitoring. For the most part, the WSG regarded these activities as useful practices (with some debate over low-impact development), but differed as to whether they should be required by the permit.

Should the MS4 stormwater permit include additional measures?

Alternative 1	The permit should be based solely on the required federal program elements.
Alternative 2	The permit should include other useful measures, in addition to the eight required
	program elements.

Considerations

Administrative

- Focusing on additional measures encourages innovation.
- By requiring additional measures, Ecology would be creating a more complex permit (or set of permits) to manage, thereby unnecessarily raising program costs.
- Not all advances in stormwater management need to be driven by a permit. Local governments
 have experimented with many innovative stormwater measures in Washington, without the
 constrictions or prescriptions of a permit.
- When local governments have flexibility to make their own decisions about additional measures, they will make better choices than those imposed by the state.
- In terms of exploring innovative approaches, we will get much further with incentives than we will from mandatory requirements.
- Mandatory requirements are great drivers of progress.

Legal

- Participation in a group monitoring program is encouraged by the federal regulations.
- The Growth Management Act and Critical Area Ordinances are far better suited to deal with drainage issues than is a state stormwater permit. Not only would requirements of the additional measures duplicate the GMA, they could undermine GMA if misapplied.

Cost and equity

- Some low impact development measures make sense, but only if the state provides money for them. Local governments are hard-pressed to fund even the basic program, without being required to do more.
- TMDLs are reactive and time-consuming and don't always focus on the appropriate pollutants. It would be less expensive to avoid them by taking proactive steps.
- O Some comparative cost data that suggest that low-impact development is less expensive to construct than conventional development.
- The cost data on low-impact development is sparse and speculative and should not be relied on to make decisions.
- The required eight measures do not fully address the existing problems caused by stormwater.
- It is much less expensive to focus on preventive measures, such as low impact development, than it is to continue developing in a conventional manner. Restoration is many times more expensive.
- The additional measures identified work much better in larger communities than in smaller communities.
- Imposing additional requirements on communities with more advanced programs can seem punitive. Forward-thinking jurisdictions should not be penalized for having undertaken significant voluntary actions.

Environmental Benefit and Impact

- Additional measures can target sensitive areas such as shellfish beds and salmon habitat better than the basic measures.
- Low-impact development ordinances can minimize and disconnect impervious surfaces and minimize disturbance of soils and vegetation.
- It is important not to draw inappropriate conclusions about the data collected over the last decade. While we are seeing improvement in the water quality, it is not at all clear why that is the case.

Structuring the Permit

Background

One of the basic issues confronting Ecology in constructing new stormwater permits is how to deal with the wide range of experience and capacity among the qualifying municipal permittees. Phase I jurisdictions have been operating under a permit since [1995?]. Some of them have programs that long-preceded this permit, so they have accumulated substantial experience in stormwater management.

In a kindred fashion, there are a number of Phase II jurisdictions that have never been regulated under a state-issued stormwater permit, yet have operated advanced stormwater management programs for years.

By contrast, most of the communities to be permitted as Phase II jurisdictions do not currently have programs that have all the components required by the federal regulations (the "six plus two"). The Association of Washington Cities and Washington State Association of Counties conducted a study in 2001-02, to gain a better understanding of the range of programs currently operating in the state. ¹⁰ This report found that half of the potential Phase II cities had programs that included at least the six components identified in EPA's. The others varied significantly in how many program elements they

¹⁰ "Needs Assessment for NPDES Phase II Permit Process" etc

addressed. None of the counties responding to the WSAC survey answered yes to all questions pertaining to the basic EPA requirements (although a few appear to have activities in six of the components). In terms of current capacity, then, the municipalities fall into three groups: Phase I communities and Phase II communities that (1) meet all requirement, (2) meet some requirements, or (3) meet few or no requirements.

Discussion

The Group explored different approaches for dealing with these differences in capacity and experience. One idea was to structure a tiered permit. Ecology would articulate different minimum actions within each tier of the permit to accommodate the different sizes among communities and variation among the existing programs as well as whether they were a Phase I or Phase II jurisdiction. The tiers might also reflect differences in resource protection or restoration needs, depending on the extent of development or impervious surface within that community, or its proximity to sensitive resources.

A variation of the tiered permit idea is that in future permit cycles, the tiers would be adjusted to move communities from lower tiers to more advanced tiers, to reflect the increased experience level. Over time, this would create a continuous improvement in all programs, and would also account for jurisdictional variation in the concept of Maximum Extent Practicable.

An alternative idea to the tiered permit is that the difference in communities would better be dealt with by establishing a variable compliance schedule, allowing communities with beginning programs extra time to ramp up. Ecology would articulate interim stages for communities to come into compliance with the permit, and would require more advanced communities to come into compliance sooner. Over the first five-year permit cycle, all qualifying communities would be expected to be fully compliant.

Another element to consider when structuring the permit is whether or not there is an end point to the permit. One perspective is that, over time (several cycles), all permittees are working toward a common, or static, end point or Maximum Extent Practicable. Another perspective is that the Maximum Extent Practicable will always vary due to the inherent variation in communities' programmatic capacity --some communities are already performing at a greater level than "six plus two"—and as a way to prevent backsliding and encourage adaptive improvements. MEP can also shift as technological advances make some solutions more economically practicable.

[We need the Group to identify how this aspect affects the structure of the permit; maybe it doesn't.]

An additional complexity in terms of the structure of the permit is that Ecology may choose to outline or prescribe the minimum or basic actions in the permit and require all communities to meet them, or it may offer communities the option of proposing their own programs to reflect differences in existing programs and community needs and interests.

How should the municipal stormwater permit be structured?

(Note: these are not mutually exclusive alternatives)

Alternative 1	The permit should establish varying compliance schedules to reflect differences in the status of existing programs among permittees.
Alternative 2	The permit should be structured in tiers to reflect differences in the size of communities, the status of their existing programs, and variability in resource protection and restoration needs.
Alternative 3	The permit should prescribe the basic requirements for all programs to meet (within the structure of Alternative 1 and Alternative 2).
Alternative 4	Jurisdictions should have the option of proposing alternative programmatic approaches to meeting permit requirements.

Considerations

Administrative

- Use of a tiering system would cause confusion and misunderstanding about what is needed for compliance.
- Ecology lacks the resources to adequately review individual jurisdiction's programs.
- It would be useful to figure out incentives for jurisdictions to move to a more advanced tier; otherwise the system doesn't make sense.
- It is unacceptable to establish a permit system that would allow private negotiations between Ecology and an applicant. All applicants need to meet a common set of standards that have been subject to public review.

Legal

Cost and Equity

- MS4 operators who have acted proactively and who operate more advanced programs are concerned they will be penalized to the extent they have gone beyond the basics. This would not be an equitable way to treat these communities.
- Smaller communities will always need to work harder to meet minimum actions.
- Local businesses ultimately bear the cost for a community's stormwater program. The more restrictive the requirements, the more expensive and difficult it is for those local businesses.
- The big expenses of a program are construction and storm and sewer maintenance. This suggests that use of a compliance schedule is a superior concept to tiering. [Was this the gist of the observation?]

Environmental Benefit and Impact

Each approach has potential benefit. The permit must be structured so that the maturity of a program does not equate to stagnation.

Compliance Requirements

Background

A basic element of all permits is the standard of performance employed to determine whether a permittee is operating in compliance with the permit. In a traditional wastewater discharge (NPDES) permit, a

permittee must meet certain water quality (chemical or biological parameters; or flow) limits either in the discharge or the receiving water. In its policy guidance on interim permitting in 1996, EPA determined such that numerical water quality-based effluent limits would not be required in the [Phase I?] stormwater permit. [citation] EPA also noted that a narrative Best-Management Practice approach would be a preferred approach to measure permit compliance.

In a recent decision the 9th Circuit Court determined that the permit must require controls to reduce the discharge of pollutants to the Maximum Extent Practicable and that for Phase II permits, a narrative based approach is preferable.¹¹

Discussion

The WSG discussed two basic approaches to compliance requirements: (1) the applicant should be required to meet numeric water-quality standards (either chemical parameters or biological indicators); and (2) the applicant should be required to meet narrative Best Management Practices [Should we explain what is meant by BMPs?]

The discussion of these choices was truncated, because Ecology was clear in its presentation on the issue that at this point, it considers narrative BMPs a clearly superior means of assessing whether a permittee is compliant with permit conditions. Most of the discussion agreed with this perspective, although several distinct special cases were noted.

How should Ecology determine that an MS4 applicant is complying with stormwater permit requirements?

Alternative 1	Applicant should be required to meet narrative Best Management Practices.
Alternative 2	Applicants should be required to meet narrative water quality standards, as well as Best
	Management Practices.
Alternative 3	Applicants should be required to meet numeric standards only in sensitive shellfish
	areas.

[Something on TMDL wasteload allocations?]

Considerations

Administrative

- Actions needed to achieve a specific numeric outcome are uncertain.
- Other, non-permitted flows may travel via MS4 conveyances. These should not be counted toward an MS4 operator's compliance with the requirements of a stormwater permit.
- o It would be administratively easier for both the permittees and Ecology to assess BMPs than numeric water quality standards.

Legal

 Both EPA guidance and federal court decisions are explicit that narrative BMPs meet the intent of the Clean Water Act.

11	[citation]	
	O I tutti O I I	

Cost and equity

- The financial cost of compliance with water quality standards may be prohibitive. Even with huge investments, it is unlikely that a permittee could meet WQ standards either at the point of discharge or in the receiving waters.
- Industrial permittees are compelled to meet numeric water quality standards.

Environmental Benefit and Impact

- While it may not make sense to have numeric measures in the next permit, there might be value in being more specific in future iterations.
- Operators of shellfish beds must meet a fecal coliform standard in order to be able to harvest the shellfish. Shellfish beds should receive special consideration when determining compliance.
- Allowing flexibility in meeting permit conditions enables a permittee to pursue a potentially more successful course of action for stormwater management, thereby resulting in cleaner waters.

Narrative water quality standards help inform where we are going with the permits, in a way that narrative BMPs don't.

Special Purpose Districts

Background

As part of its deliberations, the WSG considered the unique challenge posed by special purpose districts. "Special districts" are described in the Phase I and II regulations in conjunction with the definition of an MS4: "Owned or operated by a State, city, borough, county parish, district, association, or other public body…having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district..." Because special districts are defined as part of the MS4, special districts that are located within municipalities subject to the stormwater permit requirements must also have permit coverage.

Various laws address the establishment and operation of special districts, including drainage districts, flood control districts, ports, universities and school districts. Some of these may qualify as special districts in the context of stormwater management; however, their authorizing statutes contain different provisions regarding the authorities of the special districts to control the quality of their stormwater discharges.

Discussion

The WSG recognizes that although special purpose districts are covered under the municipal stormwater permitting requirements, they generally lack enforcement authorities (and resources) to implement a stormwater management program. WSG members acknowledge that many existing special purpose districts in Washington State are already subject to local stormwater and/or related building design ordinances, pay stormwater utility fees, and/or are regulated under an industrial stormwater permit. The WSG also acknowledges that stormwater (and other runoff) from outside the special purpose district can co-mingle in the special purpose district's MS4, posing a special challenge for stormwater management.

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¹² 40 CFR 122.26(b)(8)(i)

Alternatives

Alternative 1	Regulate special purpose districts separately from municipalities.	
Alternative 2	Regulate special purpose districts in conjunction with municipalities. To enact this,	
	generally, municipalities and special purpose districts could enter into an interlocal	
	agreement, thereby establishing a "co-permittee" relationship.	

Considerations

Administrative

- Regulating special purpose districts via municipalities would be less resource-intensive for Ecology. Ecology lacks sufficient staff resources to issue NPDES permits to each special purpose district or to assure compliance with permit requirements.
- Ecology should not require municipalities and special purpose districts to be co-permitted as a means of addressing its own administrative challenge.
- Municipalities already have complete ability to carry out their permit obligations on lands contained in special purpose districts. Co-permittee status does not afford them any benefit. However, duplicative permitting may not make sense either.

Legal

- It is inappropriate to hold municipalities accountable (through an enforceable permit) for another entity's activities and actions.
- Special purpose districts are governed by the state and cannot necessarily be compelled by the municipality to take specific action. Ecology should maintain a direct connection to these districts and assert its authority where the district does not conform to Clean Water Act requirements.
- Addressing special purpose districts apart from municipalities helps clarify the boundaries of different parties' liability under specific permits.
- "Contracts" and "agreements" entered into per a permit requirement are not technically contracts
 or agreements, since there is no option not to enter into them. It is unclear which body of law
 would apply to cases of alleged breach of contract.

Cost and Equity

- Municipalities are already expending resources to establish a sufficient stormwater management program. In consideration of this and the overlapping nature of their stormwater flows, it makes sense for special purpose districts to seek coverage under the municipal stormwater permit.
- Covering the special purpose district's MS4 under the municipal system can, under certain circumstances, contribute significant funds to the municipality's stormwater management program.

Environmental Benefit and Impact

IV. Issues of Integration and Coordination

Integration of Phase I and II Permits

Background

The Clean Water Act established a two-part system for implementing municipal stormwater permits. Larger municipalities were covered in Phase I; smaller and medium-sized jurisdictions were addressed later under Phase II. The Phase I determination took place only twice; no other jurisdictions can become Phase I permittees. Municipalities can become Phase II jurisdictions, however, once they trigger the specific population density requirements laid out in the regulations.

The Phase I regulations set fairly explicit application requirements for qualifying municipalities but also encourage applicants to explore flexible, regional, watershed-level or other types of permits. Similarly, the Phase II regulations allow a variety of permit coverage options, including general permits, joint Phase I/Phase II permits (Phase II municipality is added to the Phase I permit via a permit modification), or joint Phase II permits.

Discussion

WSG members discussed the challenges municipalities face when required through an NPDES permit to coordinate with neighboring jurisdictions, even as they acknowledged the value of interjurisdictional coordination. Challenges include reconciling different local building codes and/or governmental priorities/resources. Benefits of interjurisdictional coordination include sharing knowledge, responsibilities, and opportunities to implement permit requirements, and to integrate stormwater program activities with related efforts, such as TMDL development and implementation. Members observed that Western Washington jurisdictions demonstrate varying degrees of readiness and interest to implement a strong stormwater management permit. Where this is the case, permit options that mandate interjurisdictional coordination/integration can cause friction either by causing municipalities with mature programs to feel "dragged down" by their neighbors or by making less mature program "look bad" when compared to their neighbors' more developed programs. Elected government officials who find themselves in either situation may be reluctant to maximize integration opportunities.

The group observed that coordination could be mandated or encouraged in a variety of ways, either through or outside the permit itself. Similarly, watershed-based or site-specific provisions (e.g., coordination on illicit discharge identification) can also be incorporated into a general NPDES permit. Interlocal agreements can also effect integration without tying an action to a specific, enforceable permit. Ultimately, the group acknowledged the importance of permit content (somewhat independent of the degree of integration required by the permit).

How should Phase I and Phase II permits be integrated (if at all)?

Alternative 1	Issue separate Phase I and Phase II MS4 permits for Western Washington.	
Alternative 2	Issue a combined Phase I/Phase II MS4 permit for Western Washington. Under this	
	option, Ecology would prepare a single permit that lays out separate requirements for	
	Phase I and Phase II jurisdictions.	
Alternative 3	Issue an integrated Phase I/Phase II MS4 permit for Western Washington. Under this	
	option, Ecology issues a single permit that integrates specific permit requirements for	
	Phase I and Phase II communities.	

Alternative 4	Issue MS4 permits in Western Washington on a watershed basis. Under this option, Ecology could build on any of the watershed-based constructs to organize geographically distinct MS4 permits. A sub-alternative is to offer watershed-based permits as an alternative construct for interested Western Washington jurisdictions.
Alternative 5	Issue a Puget Sound-wide permit. Handle other Western Washington permits in another fashion.

Considerations

Administrative

- Coordinating/integrating activities across jurisdictions can be time-consuming and resourceintensive.
- Coordination may offer administrative efficiencies, e.g., related to public notice and meeting requirements, that ultimately save taxpayer dollars.
- Ecology will likely need to expend significant resources to reconcile different regulatory requirements contemplated by integrated or highly-coordinated permit options.
- Local government officials may resist being required to coordinate activities with neighboring jurisdictions.
- Opending on how geographic areas are delineated, jurisdictions may find themselves applying for several permits in the watershed-based approach. If these permits are on different cycles or contain different requirements, this approach may pose additional workload concerns for some jurisdictions.

Legal

- Phase II regulations explicitly allow for regulated entities to jointly apply for permit coverage.
- Jurisdictions have no authority to police other jurisdictions and should not be held accountable through third party lawsuits or other mechanisms for the actions or inactions of other permitted entities.

Cost/Equity

- Administering separate permits may pose additional administrative costs for Ecology but not for the permit applicants.
- Compliance with Phase I or Phase II permit requirements may cause municipalities to establish distinct business climates. Such disparities may cause businesses to seek out less restrictive jurisdictions.
- Combined or integrated permit requirements may enhance the predictability of the local regulatory climate for businesses.
- Even under an integrated permit, jurisdictions will establish their own building/development codes. Therefore, developers will still be subject to different codes in different jurisdictions. Consistency may not improve.
- Model programs (such as the option to test watershed-level permitting in Puget Sound) allow the state to explore advantages and limitations of a watershed-level permit without investing in a state or regional strategy.

Environmental Benefit and Impact

- Coordinated/integrated permits are more likely to compel jurisdictions in a given watershed to coordinate efforts to address stormwater contamination from municipal sources. Watershed-level solutions are encouraged throughout water quality programs in Washington.
- Development of a Puget Sound-wide permit allows Ecology and permittees to tailor permit requirements to address specific Puget Sound considerations (e.g., threatened salmonid habitat needs).
- Because water systems are interconnected, it is likely that their management would benefit from some level of coordinated management/protection.
- o TMDLs will ultimately require watershed-level coordination in Washington State. Options that promote watershed-level coordination help establish a stormwater management system or approach that is consistent with TMDL requirements.

MS4 Integration with Other Stormwater Permits

Discussion

The WSG also discussed how and under what circumstances the MS4 NPDES permit(s) should be integrated with other stormwater permits, including industrial, construction, and the Washington State Department of Transportation (WSDOT) statewide stormwater permits. The group acknowledged that each of these permits represents a unique situation, and offered the following comments related to each one.

Construction permit: The committee noted that the EPA's Phase I storm water program requires operators of construction sites that disturb five or more acres to obtain an NPDES construction storm water permit. MS4 operators regulated under a Phase II permit are required to develop, implement, and enforce a program to control of stormwater runoff from construction sites greater than one acre. Under the Phase II regulations, operators of construction sites that disturb one to five acres in size, including smaller sites that are part of a larger common plan of development or sale, are also to obtain a permit directly from authorized state agencies (e.g., Ecology) or EPA. The final Phase II rule also allowed regulated construction site operators located within a "qualifying State, Tribal, or local program's" jurisdiction to meet the general NPDES permit requirements through compliance with the local program. The WSG noted that the Phase II regulations generally require most regulated construction site operators to obtain two permits (one from the local permitting authority and another from Ecology) and discussed whether any streamlining opportunities might exist.

<u>Industrial Permits:</u> Unlike construction sites, industrial facilities are directly regulated under the Clean Water Act only by the state (e.g., through their NPDES wastewater discharge permit). As a rule, MS4 permitted stormwater programs only address industrial facilities through illicit discharge identification activities. Furthermore, because there is no parallel permitting process at the local level for already-constructed properties, local governments have little authority to regulate industrial facilities otherwise subject to NPDES requirements. The WSG was challenged to determine how (or whether) to strengthen the connection between MS4 and industrial stormwater permits, except, possibly, to note that municipalities could provide (and be compensated for) a potential future service such as helping monitor the quality of receiving waters into which industrial facilities discharge their wastewater.

<u>WSDOT:</u> WSG members acknowledged the special challenge WSDOT faces in implementing a statewide permit covering all highways and facilities that the agency operates or manages. WSG members noted the value in coordinating the WSDOT permit with the MS4 permit, but recognized that because permit conditions may vary among jurisdictions, a reasonable approach must be implemented.

Should MS4 permits be integrated/coordinated with construction stormwater permits?

Alternative 1	Maintain status quo; require construction site operators to seek separate local and state permits.
Alternative 2	Determine whether smaller disturbed sites (one-to-five acres) located in Phase I/II jurisdictions to seek coverage under the jurisdiction's stormwater permit. Smaller disturbed construction sites may not need to apply directly to Ecology for permit coverage if they are located in a jurisdiction with a "qualified program."

Considerations

Administrative

- Currently, the state and local governments both have the responsibility to regulate construction sites, including smaller sites. This may set up some unnecessary programmatic redundancies, both in permitting and in inspection/compliance responsibilities. Identifying ways to streamline permitting practices and/or inspection activities benefits all parties, including the construction site operator.
- Ecology has not yet determined what constitutes a "qualifying program" in the context of this issue. For alternative 2 to work, Ecology will need to provide such clarification.

Legal

- State and local agencies do not share liability for failure to enforce requirements under the current two-permit system. It is unclear who would be held legally responsible for stormwater runoff problems found at construction sites covered under "qualifying" MS4 programs.
- Phase II MS4s must establish construction site runoff controls as part of compliance with six plus two minimum requirements.

Cost and Equity

- It is inefficient and oftentimes impractical for state agency staff to visit ongoing construction sites
 to assess operators' compliance with applicable runoff control requirements. In practice,
 therefore, local entities handle most, if not all, inspection responsibilities. At this time, however,
 the state does not compensate the local agency staff for undertaking these inspections.
- State may be able to restrict construction site activities more heavily than local governments can (due to political or regulatory constraints).
- Some monies collected by Ecology as stormwater construction permit application fees will be lost if the State adopts Alternative 2.
- Under Alternative 2, development may gravitate to municipalities with qualifying programs (as businesses seek to minimize administrative efforts and fees associated with permit applications.

Environmental Benefit and Impact

• Local inspectors are more likely to be able to visit site and identify runoff problems soon after storm events. Identifying and correcting such problems is key to protecting water quality.

V. Issues Specific to the State or Region